

MATERIAL SAFETY DATA SHEET

I. GENERAL INFORMATION

ENFORCER PRODUCTS, INC. P. O. BOX 1060 CARTERSVILLE, GA. 30120	MANUFACTURER'S PHONE NUMBER: (770) 386-0801 24 HOUR EMERGENCY NUMBER: 1-800-255-3924	HAZARD RATINGS: HEALTH_2_ REACTIVITY_1_ FLAMMABILITY_1_ PERSONAL PROTECTION_
PRODUCT NAME: DRAIN CARE ROOT KILL II		EPA REG. NO.: 1278-8-40849
PREPARED BY: TRESSIE DEMPSEY		DATE: JUNE 13, 1997

II. INGREDIENTS

PRINCIPAL COMPONENTS	CAS NUMBER	PERCENT	OSHA PEL	ACGIH TLV	OTHER	HAZARD
COPPER SULFATE PENTAHYDRATE	7758-99-8	99.0	1MG/M ³ *	1 MG/M ³		
<ul style="list-style-type: none"> AS COPPER DUST OR MISTS (CAS# 7740-50-8) ANHYDROUS CUPRIC SULFATE SUPERFUND RQ = 10#/4.54 KG 			*DUST/ MIST AS COPPER			
COMPONENTS NOT PRECISELY IDENTIFIED ARE PROPRIETARY OR NOT HAZARDOUS. REPORTABLE UNDER SARA TITLE III SECTION 313 COPPER AS METALLIC = 25.2% BY WEIGHT						

III. PHYSICAL DATA

BOILING POINT: DEHYDRATES AT 250°C	SPECIFIC GRAVITY: 2.284	VAPOR PRESSURE (mm Hg.): 0	pH: 4.8
PERCENT VOLATILE BY VOLUME: N/A	VAPOR DENSITY: 35-40 LBS/FT ³	EVAPORATION RATE (Butyl Acetate = 1): N/A	
SOLUBILITY IN WATER: 83.1G/100CC = 30°C	APPEARANCE & ODOR: ODORLESS, BLUE CRYSTAL	MELTING POINT: = -4H ₂ O @ 110°C	

IV. FIRE & EXPLOSION DATA

FLASHPOINT (Method used): NOT DETERMINED	AUTOIGNITION TEMPERATURE: NOT DETERMINED	FLAMMABLE LIMITS: N/A
LEL: N/A	UEL: N/A	EXTINGUISHING MEDIA: USE DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR FOAM.
GENERAL HAZARD: NEGLIGIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. PREVENT HUMAN EXPOSURE TO FIRE, SMOKE, FUMES OR PRODUCTS OF COMBUSTION.		
FIRE FIGHTING EQUIPMENT: WEAR PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS.		
HAZARDOUS COMBUSTION PRODUCTS: SULFUR TRIOXIDE ABOVE 650°C. THERMAL DECOMPOSITION MAY RELEASE TOXIC AND/OR HAZARDOUS GASES.		

V. REACTIVITY HAZARD DATA

STABILITY: <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	CONDITIONS TO AVOID: HIGH HEAT, REDUCING AGENTS.
INCOMPATIBILITY (Materials to avoid): CONTACT WITH MAGNESIUM METAL MAY GENERATE DANGEROUS LEVELS OF HYDROGEN GAS.	
HAZARDOUS POLYMERIZATION:	MATERIAL IS NOT KNOWN TO POLYMERIZE. CONDITIONS TO AVOID: NONE KNOWN

HAZARDOUS DECOMPOSITION: SULFUR TRIOXIDE ABOVE 650°C.	

VI. HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: INHALATION [X] INGESTION [X] SKIN ABSORPTION [X] EYE [X] NOT HAZARDOUS []

EMERGENCY OVERVIEW: CORROSIVE TO THE EYES AND MUCOUS MEMBRANES. MODERATELY TOXIC DERMALLY. IRRITATING TO THE GASTRIC MUCOSA. SEE BELOW FOR ROUTE-SPECIFIC DETAILS.

ACUTE EFFECTS OF OVEREXPOSURE:

INGESTION: INGESTION OF COPPER MAY RESULT IN IRRITATION OF THE GASTROINTESTINAL TRACT, NAUSEA, VOMITING, SALIVATION, GASTRIC PAIN, HEMORRHAGIC GASTRITIS, DIARRHEA, CAPILLARY DAMAGE, LIVER AND KIDNEY DAMAGE AND CENTRAL NERVOUS SYSTEM STIMULATION, FOLLOWED BY DEPRESSION. JAUNDICE, PAIN IN THE LIVER AND HEMOLYTIC ANEMIA HAVE BEEN REPORTED FOLLOWING ACUTE HUMAN POISONINGS.

SKIN CONTACT: SLIGHT SKIN IRRITANT. EXCESSIVE EXPOSURE, ESPECIALLY IF PROLONGED, MAY PRODUCE SKIN IRRITATION. REPEATED EXPOSURE MAY CAUSE ALLERGIC CONTACT DERMATITIS. MAY CAUSE IRRITATION OR BURNS ON WET SKIN.

SKIN ABSORPTION: MODERATELY TOXIC.

INHALATION: MAY CAUSE IRRITATION TO MUCOUS MEMBRANES. EXPOSURE TO COPPER FUMES MAY RESULT IN METALLIC TASTE, NAUSEA, VOMITING, AND METAL FUME FEVER WITH CHILLS, FEVER, ACHING MUSCLES, DRY THROATS AND HEADACHE. AVOID INHALING DUST OR SPRAY MISTS. STRONG IRRITANT TO THE NOSE AND THROAT.

EYE CONTACT: CORROSIVE TO EYES. EXPOSURE TO THE GRANULES MAY CAUSE SEVERE EYE DAMAGE. MAY CAUSE SEVERE IRRITATION WITH REDNESS, PAIN AND BLURRED VISION.

EMERGENCY FIRST AID PROCEDURES:

INGESTION: DRINK 1 OR 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING BACK OF THROAT WITH FINGER. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND SHOES. WASH WITH PLENTY OF SOAP AND WATER FOR 15 -20 MINUTES UNTIL NO EVIDENCE OF CHEMICAL REMAINS. GET PROFESSIONAL MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT: HOLD EYELIDS OPEN AND FLUSH WITH WATER FOR 15-20 MINUTES UNTIL NO EVIDENCE OF CHEMICAL REMAINS. GET MEDICAL ATTENTION.

CHRONIC: RARE, EXCEPT IN INDIVIDUALS WITH WILSON'S DISEASE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED: WILSON'S DISEASE OR G6PD DEFICIENCY (INDIVIDUAL ABSORBS, RETAINS AND STORES COPPER AGGRAVATED BY EXPOSURE EXCESSIVELY). SYMPTOMS MAY INCLUDE NAUSEA, EPIGASTRIC PAIN, DIARRHEA, DIZZINESS, JAUNDICE, AND GENERAL DEBILITY.

VII. CONTROL AND PROTECTIVE MEASURES

EYE PROTECTION: WEAR PROTECTIVE EYE WEAR (CHEMICAL GOGGLES) TO PREVENT CONTACT WITH THIS SUBSTANCE.

RESPIRATORY PROTECTION (specify): WHERE ADEQUATE VENTILATION IS NOT AVAILABLE, WEAR AN APPROVED PESTICIDE RESPIRATOR FOR DUSTS AND MISTS.

SKIN PROTECTION: USE PROTECTIVE GLOVES, LONG-SLEEVED SHIRT AND LONG PANTS WHEN APPLYING THIS PRODUCT.

VENTILATION: CONTROL ENCLOSED SPACES WITH ADEQUATE VENTILATION TO PREVENT EXCEEDANCE OF ACGIH TLV OR OSHA PEL (1mg/m3).

PRECAUTIONS		VIII. SPECIAL
HANDLING AND STORING PROCEDURES:	STORE IN A CLEAN, DRY AREA. DO NOT STORE NEAR FEED, FOOD OR WITHIN THE REACH OF CHILDREN.	
RELEASE OR SPILL PROCEDURES:	WEAR PROTECTIVE CLOTHING. COVER SPILL WITH ABSORBENT MATERIAL SUCH AS SWEEPING COMPOUND OR LIME. SWEEP UP AND PLACE IN AN APPROPRIATE CHEMICAL WASTE CONTAINER FOR DISPOSAL.	
WASTE DISPOSAL METHOD:	COMPLY WITH APPROPRIATE DISPOSAL REGULATIONS. DO NOT FLUSH TO SURFACE WATER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS.	
REGULATORY INFORMATION:	OSHA: THIS PRODUCT IS CONSIDERED HAZARDOUS UNDER THE OSHA HAZARDOUS COMMUNICATION STANDARD (29 CFR 1910.1200). TSCA: ALL PRODUCT COMPONENTS ARE ON THE TSCA CHEMICAL INVENTORY. CERCLA: RELEASES OF A COMPONENT OF THIS MATERIAL (METALLIC COPPER) TO AIR, LAND OR WATER ARE REPORTABLE TO THE NATIONAL RESPONSE CENTER UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) OR TO THE STATE AND LOCAL EMERGENCY PLANNING COMMITTEES UNDER THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III SECTION 304.	

IX. ADDITIONAL INFORMATION	
PROPER DOT SHIPPING NAME:	RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, n.o.s., (COPPER SULFATE) HAZARD CLASS: 9 ID NUMBER: UN3077 PACKAGING GROUP: III HAZARDOUS SUBSTANCE RQ: 10 POUNDS(4.54KG) PACKAGING REFERENCES: 49CFR 173.213, 172.303 (B)(1)(2)
EMPTY CONTAINER HANDLING:	CLOSE CONTAINER AND DISPOSE OF WITH SANITARY WASTE. DO NOT REUSE EMPTY CONTAINER. KEEP AWAY FROM CHILDREN AND PETS.
SARA TITLE III: 311/312 HAZARD CATEGORIES:	THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" RELATING TO SARA TITLE III, AND IS CATEGORIZED AS AN ACUTE HEALTH HAZARD.
313 REPORTABLE INGREDIENTS:	THIS PRODUCT CONTAINS A PERCENTAGE OF METALLIC COPPER (CAS# 7440-50-8) WHICH IS LISTED IN SECTION 313 ABOVE DE MINIMIS CONCENTRATIONS.
THIS INFORMATION COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.	

***** END OF REPORT *****